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Time for Water Systems to Get Moving on Meeting the New Federal Standard for Arsenic in Drinking Water

By Steve Owens, Director of the Arizona Dept. of Environmental Quality

In 2003 the Arizona Department of Environmental Quality unveiled its plan to help the state's small and rural community water systems comply with the new, stricter federal standard for arsenic in drinking water.

The new standard requires Arizona's 1,700 public water systems to lower the concentration of arsenic in their drinking water from 50 parts per billion to 10 ppb by January 2006 – a significant challenge for water systems in Arizona because arsenic occurs naturally in soil and groundwater here at concentrations ranging from 10 ppb to 200 ppb.

The new federal requirement is particularly challenging for the state's 287 small water systems and those in rural areas because they have fewer customers to help pay for the compliance costs and because they rely primarily on groundwater as their drinking water sources. For this reason, ADEQ's plan is designed specifically to meet the small systems' requirements.

ADEQ's Arsenic Master Plan simplifies the compliance requirements and provides a list of the most cost-effective solutions for water systems with fewer than 10,000 customers, based upon their individual water sources and system configurations.

Since making the plan available to water systems statewide, ADEQ has continued to work closely with the Arizona Corporation Commission, the Water Infrastructure Finance Authority of Arizona, the Greater Arizona Development Authority, the Border Environmental Cooperation Commission, USDA Rural Utilities Service, and the Rural Utilities Consumer Office to identify the needs and potential resources required to meet the challenge. ADEQ also has conducted customized county-by-county analyses of water systems to review the compliance challenges and options for treatment and financing, and developed a mentoring program to allow small systems to learn from larger municipalities.

Despite these efforts, fewer than 50 of the state's 287 small water systems have begun to take the steps needed to meet the compliance deadline. This could cause problems down the road.

The need to move ahead rapidly is critical because many of these water systems have no arsenic treatment equipment. These operators will be installing and operating arsenic removal systems for the first time, and most will need financial assistance to do so. ADEQ had hoped by this time systems would have identified appropriate solutions to suit their situations, developed cost estimates and begun to discuss financing options with WIFA and the Arizona Corporation Commission.

Financing options for water treatment facilities range from obtaining grants or loans to issuing bonds. The Water Infrastructure Finance Authority, Arizona Rural Development, the Border Environmental Cooperation Commission and the North American Development Bank are financial assistance organizations that specialize in financing water system infrastructure projects.

Each of these organizations has slightly different missions and requirements, but together they offer a wide range of choices for small water systems. The Water Infrastructure Finance Authority is a state agency that provides low-interest loans to finance water and wastewater infrastructure projects. Arizona Rural Development administers water and wastewater loan and grant programs for Arizona's rural areas and offers technical assistance. The Border Environmental Cooperation Commission and the North American Development Bank provide capital for environmental infrastructure projects in the border region (within 62 miles (100 km) of the international border).

Small water systems may be waiting for inexpensive technologies to be developed. ADEQ understands that concern and continues to seek federal funds to research and develop low-cost arsenic removal technologies. In June, the state was awarded two arsenic removal research grants, and we hope to get several more in the next grant cycle. We are also advocating that these small systems be granted flexibility from the Corporation Commission to take advantage of any cost savings that come along after their rate increases are approved.

The key to achieving compliance with the new federal arsenic standard by 2006 is cooperation and coordination of all the regulating agencies, associations and water systems. Now is the time to get moving on compliance.